

## Remarks

### *Support for the amended claims*

It will be immediately apparent from the top views of the bicycle frame with molds applied to the frame joints at 602 in FIG. 6, 703 in FIG. 7, in the lower right hand corner of FIG. 8, and the lower right hand corner of FIG. 10 that the molds used for the lugs on the frame have "abutting parting planes", as set forth in amended claim 25. That the molds have abutting parting planes is further confirmed by the details of the manner in which the frame joints are wrapped in FIGs. 9 and 10, which show that none of the carbon fiber fabric used to wrap the joints extends between the parting planes of the molds. Claim 25 as amended is consequently supported by the Specification as filed.

New claims 28 and 29 correspond to claims 18 and 19 as amended Dec. 30, 2005 and canceled Oct. 23, 2006 and new claims 30 and 31 correspond to claims 22 and 23 as also amended Dec. 30 2005 and canceled Oct. 23 2006.

### *Patentability of amended claim 25 over the references*

As Examiner is aware, a rejection under 35 U.S.C. 103 requires that the references that are combined to make the rejection show all of the limitations of the claim under rejection. As amended, the sole independent claim, claim 25, includes the limitation "a mold having abutting parting planes". The molds of neither Bishop nor Barron have this limitation.

### Bishop

As can be seen most clearly in FIG. 6 and described at col. 4, lines 12-26, 38-69, col. 3, line 29-col. 4, line 3, and col. 5, 1-10, Bishop's frame is glued together with fast-setting glue and a single layer of carbon fiber fabric made up of two overlapping pieces 40(a) and 40(b) is wrapped around the joined parts (col. 4, lines 38-52). The fabric sheets making up the remainder of the lay-up are laid onto into each half of Bishop's mold (col. 3, line 29-col.4, line 10. Each sheet is then worked into the part of the mold which will

contain the tubes of the frame, with the sheets of lay-up extending onto the parting planes of the mold, as shown in FIG. 4. The frame is then placed in one half of the mold and the other half is then placed on top of the frame and the halves are bolted together to place pressure on the lay-up. Bishop's mold thus does not disclose the limitation "abutting parting planes".

#### Baron

Baron's mold also does not have abutting parting planes. As best shown in Baron's FIG. 5 and explained beginning at col. 5 line, line 14, Baron's mold has an inner mold 42 and an outer mold 49; between the molds are the layers 12', 14', and 22' of the layup (FIG. 7). Also between the molds are layers 60, 62, 64, 66, and 68 of silicone rubber. Silicone rubber layers 60-64 are located between inner mold 42 and the layup; silicone rubber layers 66 and 68 are located between the layup and outer mold 49; layer 60 includes electric heaters and layers 66 and 68 may also include electric heaters; when the heaters are turned on, the layers 60-68 of silicone rubber expand and force the layers of the layup together. As with Bishop's mold, there is no point where the surfaces of inner mold 42 and outer mold 49 meet, and consequently, Baron's mold, like Bishop's mold, does not disclose the limitation "abutting parting planes".

#### Other limitations of claim 25 that are not disclosed in the combined references

The mold of claim 25 not only has abutting parting planes; it also "completely encloses the lay-up and the tubes at the joint". Because Bishop's mold does not have abutting parting planes, it cannot and does not "completely enclose[] the lay-up and the tubes at the joint". In Baron, there is simply no disclosure at all of a mold that encloses tubes.

#### Further limitations in the dependent claims that are not disclosed in the references

In the final Office action of 1/10/2007, Examiner objected to claims 20 and 27 as being dependent from unpatentable claims; these claims thus include further limitations that are not disclosed in the references. With regard to claim 26, Bishop's process for curing lugs does not involve the application of heat at all (see the Abstract) and in Baron, the mold is heated by the heaters in the layers 60-of silicone rubber inside the mold and optionally

also by heaters in the ceramic bricks making up upper mold 49; there is thus no disclosure of the claimed mold "made of a heat-conducting material", with the heat being "applied to the mold." With regard to claims 29-30, these claims all involve "a layer of expandable syntactic foam in the lay-up"; as set forth in the Specification as filed, the syntactic foam expands up to 650%, which clearly distinguishes it from Bishop's "putty-like mixture of microballoons and adhesive" (col. 3, lines 57-58). There is no disclosure at all in Baron of the use of expandable foam within the mold.

*Patentability of the claims over the references*

The only dependent claim, claim 25, is patentable over the references because neither of the references discloses a mold with "abutting parting planes" or the use of such a mold in which the mold's inner surface "completely enclos[es] the layup and the tubes at the joint", as set forth in claim 25. Because neither of the references discloses these limitations, the claim as amended overcomes the rejection under 35 U.S.C. 103. Because claim 25 is patentable, so are all of the claims dependent from that claim. Additionally, as explained above, dependent claims 20, 27, 26, and 28-31 all set forth additional limitations that are not disclosed in the references, and these claims are thus patentable in their own rights over the references.

**Conclusion**

Applicant has amended his Specification to use the term "silicone" throughout and has amended his claims in a fashion which is fully supported by the Specification as filed and overcomes the rejections in the final Office action. As such, the amendment satisfies 37 C.F.R. 1.111(b). A fee of \$395.00 for the RCE accompanies this *Submission*. Applicant consequently respectfully requests that Examiner withdraw the finality of his rejection, as specified in 37 C.F.R. 1.114(d). No further fees are believed to be required. Please charge any additional fees and credit any overpayment to deposit account number 501315.

Respectfully submitted,

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